

Amendments to the Claims:

1. (Currently amended): A recombinant porcine adenovirus capable of expressing heterologous DNA ~~of interest~~, said DNA of interest being stably integrated into an appropriate site of said recombinant porcine adenovirus genome.
2. (Currently amended): A recombinant vector including a recombinant porcine adenovirus stably incorporating, and capable of expressing heterologous DNA ~~of interest~~.
3. (Canceled)
4. (Previously amended): A recombinant vector as claimed in claim 2 wherein said recombinant porcine adenovirus includes a live porcine adenovirus having virion structural proteins unchanged from those in a native porcine adenovirus from which said recombinant porcine adenovirus is derived.
- 5-24. (Canceled)
25. (Previously amended): A recombinant vector as claimed in claim 2 wherein said recombinant porcine adenovirus is selected from the group consisting of serotypes 3 and 4.
26. (Currently amended): A recombinant vector as claimed in claim 2 wherein said heterologous DNA ~~of interest~~ is stably integrated into the non-essential regions of the porcine adenovirus genome.
27. (Currently amended): A recombinant vector as claimed in claim 2 wherein said heterologous DNA ~~of interest~~ is stably integrated into the right hand end of the genome.
28. (Currently amended): A recombinant vector as claimed in claim 27 wherein said heterologous DNA ~~of interest~~ is stably integrated into the right hand end of the genome at map units 97 to 99.5.
29. (Currently amended): A recombinant vector as claimed in claim 2 wherein said heterologous DNA ~~of interest~~ is stably integrated into the E3 region of the genome.

30. (Currently amended): A recombinant vector as claimed in claim 29 wherein said heterologous DNA of interest is stably integrated into the E3 region of the genome at map units 81-84.
31. (Previously amended): A method of producing a recombinant porcine adenovirus vector for use as a vaccine including inserting into a non-essential region of a porcine adenovirus genome, at least one heterologous nucleotide sequence in association with an effective promoter sequence.
32. (Original): A method as claimed in claim 31 wherein prior to insertion of said heterologous nucleotide sequence, a restriction enzyme site is inserted into said non-essential region of said porcine adenovirus genome.
- 33-38. (Cancelled)
39. (Previously amended): A method of vaccination of pigs against disease including administering to said pigs a first recombinant porcine adenovirus vector stably incorporating, and capable of expression of a heterologous nucleotide sequence encoding at least one antigenic determinant of said disease against which vaccination is desired.
40. (Previously amended): A method as claimed in claim 39 including administering to said pig a second porcine adenovirus vector including at least one heterologous nucleotide sequence which differs from a heterologous nucleotide sequence incorporated in said first recombinant porcine adenovirus vector.
41. (Original): A method as claimed in claim 40 wherein said second porcine adenovirus vector comprises a serotype different to that of said first porcine adenovirus vector.
42. (Previously amended): A method as claimed in claim 40 wherein said second porcine adenovirus vector incorporates, and is capable of expression of at least one heterologous nucleotide sequence encoding an immuno-potentiating molecule.
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43. (Canceled.)

44. (Currently amended): A recombinant vector as claimed in claim ~~43~~ 42 wherein said heterologous nucleotide sequence is capable of expression as an antigenic polypeptide.
45. (Previously added): A recombinant vector as claimed in claim 44 wherein said heterologous nucleotide sequence is capable of expression as an immuno-potentiating molecule.
46. (Previously added): A recombinant vector as claimed in claim 44 wherein said heterologous nucleotide sequence encodes antigenic determinants of infectious agents causing intestinal diseases in pigs.
47. (Previously added): A recombinant vector as claimed in claim 44 wherein said heterologous nucleotide sequence encodes antigenic determinants of infectious agents causing respiratory diseases in pigs.
48. (Previously added): A recombinant vector as claimed in claim 44 wherein said heterologous nucleotide sequence encodes an antigenic determinant of pseudorabies virus (Aujeszky's disease virus).
- 21 49. (Previously added): A recombinant vector as claimed in claim 44 wherein said heterologous nucleotide sequence encodes an antigenic determinant of glycoprotein D of pseudorabies virus.
50. (Previously added): A recombinant vector as claimed in claim 44 wherein said heterologous nucleotide sequence encodes an antigenic determinant of porcine respiratory and reproductive syndrome virus (PRRSV).
51. (Previously added): A recombinant vector as claimed in claim 44 wherein said heterologous nucleotide sequence encodes an antigenic determinant of Hog cholera virus.
52. (Previously added): A recombinant vector as claimed in claim 44 wherein said heterologous nucleotide sequence encodes an antigenic determinant of porcine parvovirus.

53. (Previously added): A recombinant vector as claimed in claim 44 wherein said heterologous nucleotide sequence encodes an antigenic determinant of porcine coronavirus.
54. (Previously added): A recombinant vector as claimed in claim 44 wherein said heterologous nucleotide sequence encodes an antigenic determinant of porcine rotavirus.
55. (Previously added): A recombinant vector as claimed in claim 44 wherein said heterologous nucleotide sequence encodes an antigenic determinant of porcine parainfluenza virus.
56. (Previously added): A recombinant vector as claimed in claim 44 wherein said heterologous nucleotide sequence encodes an antigenic determinant of *Mycoplasma hyopneumonia*.
57. (Previously added): A recombinant vector as claimed in claim 44 wherein said heterologous nucleotide sequence encodes FLT-3 ligand.
58. (Previously added): A recombinant vector as claimed in claim 44 wherein said heterologous nucleotide sequence encodes interleukin-3 (IL-3).
59. (Previously added): A recombinant vector as claimed in claim 44 wherein said heterologous nucleotide sequence encodes porcine interleukin-4 (IL-4).
60. (Previously added): A recombinant vector as claimed in claim 44 wherein said heterologous nucleotide sequence encodes gamma interferon.
61. (Previously added): A recombinant vector as claimed in claim 44 wherein said heterologous nucleotide sequence encodes porcine granulocyte macrophage colony stimulating factor (GM-CSF).
62. (Previously added): A recombinant vector as claimed in claim 44 wherein said heterologous nucleotide sequence encodes porcine granulocyte colony stimulating factor (G-CSF).